

Claims

We Claim:

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1. In a client device, a method comprising:
receiving externally provided control operations;
determining a current operating state of said client device; and
conditionally executing said control operations if execution of said control operations are permitted while said client device is in said determined current state.
 2. The method of claim 1, wherein receiving externally provided control operations includes receiving a system reset operation.
 3. The method of claim 1, wherein receiving externally provided control operations includes receiving a system power operation.
 4. The method of claim 1, wherein said externally provided control operations are received from a server device coupled to said client device over a network.
 5. The method of claim 1, wherein said current operating state of said client device is determined by inspecting at least one status register on said client.
 6. The method of claim 1, wherein said control operations are permitted while said client device is in a system hung state.

1 7. The method of claim 1, wherein said externally provided control operations are
2 received via a network data packet encapsulated according to a remote management
3 and control protocol (RMCP).

1 8. An apparatus comprising:
2 a first electronic component;
3 a bus;
4 a sensor coupled to said bus and said first electronic component; and
5 a second electronic component coupled to said bus to conditionally cause said
6 first electronic component to perform a plurality of functions through said sensor, via
7 said bus, responsive to externally provided control operations.

1 9. The apparatus of claim 8, wherein said first electronic component further
2 comprises a reset pin, and wherein said second electronic component coupled to said
3 bus conditionally causes said first electronic component to perform a reset function.

1 10. The apparatus of claim 9, wherein said first electronic component includes a
2 processor.

1 11. The apparatus of claim 8, wherein said bus includes a system management bus.

1 12. The apparatus of claim 8, further comprising a network controller.

1 13. The apparatus of claim 12, wherein said external control operations are provided
2 by a server device connected to said apparatus through said network controller.

1 14. The apparatus of claim 8, further comprising:
2 an operating system; and
3 a processor to execute said operating system.

1 15. The apparatus of claim 14, wherein said second electronic component
2 conditionally causes said first electronic component to perform said plurality of functions
3 prior to said operating system having been executed by said processor.

1 16. The apparatus of claim 8, wherein said externally provided control operations are
2 encapsulated in a remote management and control protocol (RMCP) formed data
3 packet.

1 17. In a server, a method comprising:
2 providing a first re-boot command to a remote client device to re-boot said
3 remote client device to a first operational state;
4 determining if said remote client device was successful in re-booting to said first
5 operational state; and
6 providing a second re-boot command to said remote client device to re-boot said
7 remote client device to a second operational state, if said remote client device was
8 unsuccessful in re-booting to said first operational state.

1 18. The method of claim 17, wherein said at least one of said first and second re-
2 boot commands are provided to said remote client while said remote client is in an
3 operating system unavailable state.

1 19. The method of claim 18, wherein said operating system unavailable state
2 includes an operating system hung state.

1 20. The method of claim 17, wherein said second operational state is a reduced
2 function operational state.

1 21. The method of claim 17, wherein said first re-boot command is operative to
2 select one of a plurality of boot modes.

1 22. The method of claim 21, wherein said plurality of boot modes include a safe boot
2 mode, a diagnostic boot mode, alternative operating system boot.

1 23. The method of claim 17, wherein at least one of said first and second re-boot
2 commands are encapsulated in a network data packet according to a remote
3 management and control protocol (RMCP) to be provided to said remote client device.